WHAT IS CLAIMED IS:

1. A method of segmenting an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter, said method comprising the steps of selecting an initial location within the structure to be segmented, assigning to each of the data points a value of connectivity indicative of the confidence that respective ones of the data points are part of the same structure as said initial location, said value of connectivity including a function of the distance of the respective point from said initial location, establishing a threshold value for said value of connectivity and selecting for display data points meeting said threshold value.

2. A method according to claim 1 wherein said assignment of a value indicative of confidence level includes monitoring variations in said predetermined parameter along a path between said points and utilizing a function employing variations in said parameter as an indicator of said value of connectivity.

3. A method according to claim 2 wherein the length of said path is combined with said function employing variations of said parameter to obtain said value of connectivity.

4. A method according to claim 2 wherein a weighting factor is applied to said length of said path to vary the effect of said distance and said value of connectivity.

5. A method according to claim 4 wherein said weighting factor is variable.

6. A method according to claim 1 wherein said threshold value is adjustable to vary the data points selected for display.

7. A method according to claim 2 wherein said function employing variations in said parameter is an indication of the maximum variation in said parameter.

18

8. A method according to claim 3 wherein a plurality of paths between said initial location and respective ones of said points are evaluated and a value indicative of confidence level attributed to each path and a function employing the plurality of connectivity values obtained from said plurality of paths is assigned to said data point.

9. A method according to claim 7 wherein said plurality of paths is limited by application of a volume size value.

10. A method according to claim 3 wherein a value of said predetermined parameter is mapped to a table to assign one of a plurality of values thereto and said evaluation of variation of said parameter is evaluated on the basis of values obtained from said table.

11. A method according to claim 3 wherein values of said predetermined parameter are compared to a predefined range of values and those outside said range modified.

12. A method according to claim 11 wherein said values are modified by reducing said values to zero.

13. A method according to claim 3 wherein an area of said image is selected and values of said predetermined parameter in said area are modified.

14. A method according to claim 12 wherein said values are modified by reducing said values to zero.

15. A method according to claim 3 wherein values of said predetermined characteristic are exceeding said threshold are changed to a common value.

16. A method according to claim 3 wherein values of said predetermined parameter are compared to said initial location and those within predefined limits of that of said initial location are selected for further processing.

19

17. A method according to claim 1 wherein the number of the selected data points is compared to an anticipated value.

18. A method according to claim 17 wherein said threshold is adjusted to bring said number of selected data points into conformity with said anticipated value.

19. A method according to claim 17 wherein said set of selected data points represents a volume of a structure.

20. A method according to claim 1 wherein said initial location is selected from a set of data points other than those being segmented.

21. A method according to claim 20 wherein said initial location is selected based upon characteristics in said data set indicative of a particular feature.

22. A method according to claim 1 wherein said initial location is selected from examination of a set of data points to identify a characteristic indicative of a particular feature.

23. An imaging apparatus comprising a data store having a set of spatially related data points representing variations in a predetermined parameter, a comparator to compare a value of said predetermined parameter at said point with that of an initial location and distance of said point from said initial location and establish a value of connectivity indicative of the confidence that respective ones of said data points are part of the same structure, and a selector to select respective points that meet an established threshold.

24. An apparatus according to claim 23 including a path selector to select a plurality of paths between said initial location and each of said respective points, said comparator selecting a maximum value of connectivity.

25. A method of segmenting an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter, said

method comprising the steps of selecting said initial location from an examination of a data set of said structure to identify particular characteristics of said structure.

26. A method according to claim 25 wherein said data set is said set of data points.

27. A method according to claim 25 wherein said data set is obtained from a set of data points other than those being segmented.

28. A method of segmenting an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter, said method comprising the step of establishing a first number of data points expected to represent a segmented feature of said image, establishing a threshold value of a characteristic of said data set, determining a second number of data points meeting said threshold and comparing said first and second number of data points.

29. A method according to claim 28 including the step of adjusting said threshold to correlate said first and second numbers.